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PLANT IMMIGRANTS

REC'D LIBRARY JUL 21 1916 BUREAU OF PLANT INDUSTRY

Descriptive notes furnished mainly by Agricultural Explorers and Foreign Correspondents relative to the more important introduced plants which have recently arrived at the Office of Foreign Seed and Plant Introduction of the Bureau of Plant Industry of the Department of Agriculture, together with accounts of the behavior in America of previous introductions. Descriptions appearing here are revised and published later in the Inventory of Plants Imported.

No. 117. JANUARY 1916.

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Plates:

Dried Strips of Watermelon, Citrullus vulgaris.
Fresh Mung Bean Sprouts, Phaseolus radiatus.
The Chinese Pistache, Pistacia chinensis.

Applications for material listed in these multigraphed sheets may be made at any time to this Office. As they are received they are placed on file, and when the material is ready for the use of experimenters it is sent to those on the list of applicants who can show that they are prepared to care for it as well as to others selected because of their special fitness to experiment with the particular plants imported. Do not wait for the annual List of New Plant Introductions.

One of the main objects of the Office of Foreign Seed and Plant Introduction is to secure material for plant experimenters, and it will undertake as far as possible to fill any specific requests for foreign seeds or plants from plant breeders and others interested.

Permission to publish on application only.

Alloteropsis semialata (R.Br.) Hitchc. (Poaceae.) 41751. Seeds of silver grass from the Australian Exhibit at the Panama Pacific International Exposition, San Francisco, California. Procured by Mr. Roland McKee. "White-topped grass, good pasturage, 2 feet." (McKee.)

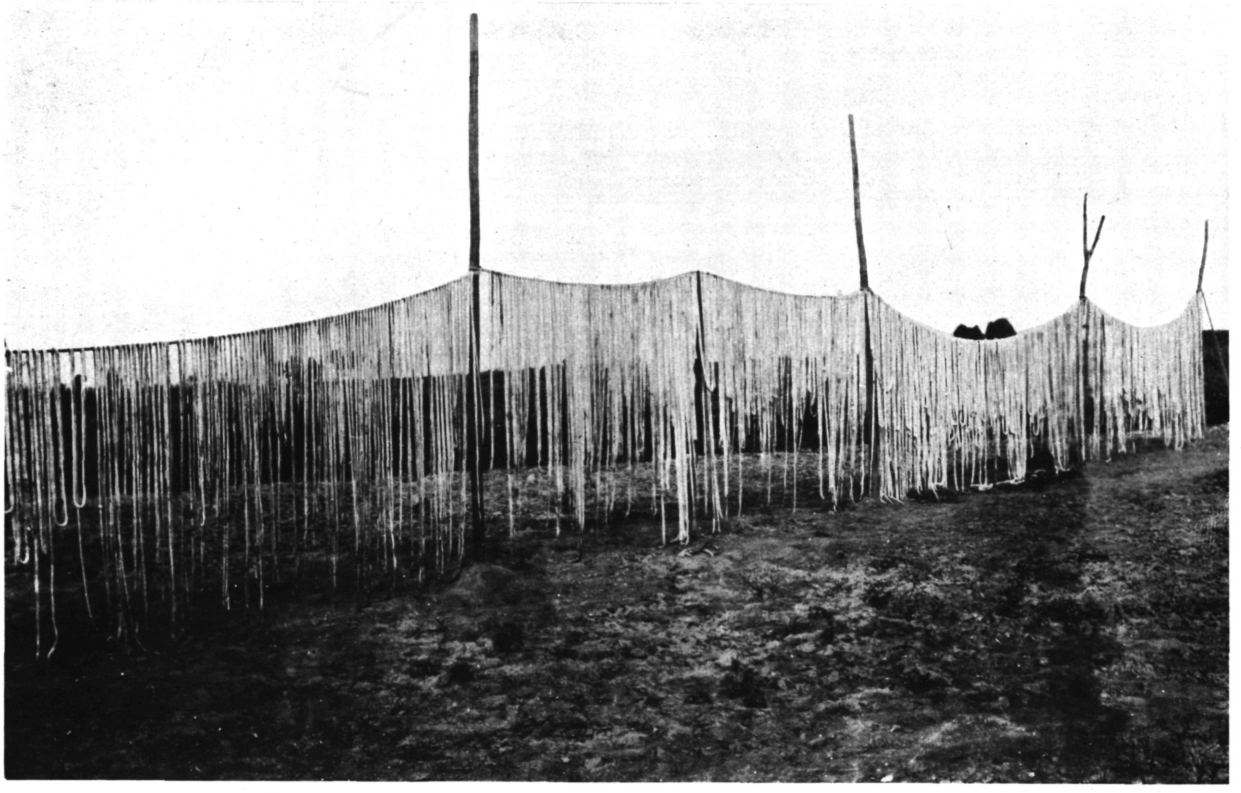
Amygdalus tangutica (Batal.) Korsh. (Amygdalaceae.) 41708 & 41709. Rough and smooth shelled seeds of Tangutian almond received from Taochow, Old City, Kansu, China. Presented by Rev. C. F. Snyder, at request of Mr. F. N. Meyer. "A variable species of bush-almond and though its kernels are bitter and it throws up a lot of stems and is spiny, still I believe it has a decided value as a factor in breeding experiments, for it seems to be very hardy and drought resistant. One finds it mainly on sheltered rocky and loess slopes at elevations from 4,000 feet up to about 10,000 feet above sea. In these higher regions, however, it does not get as cold as one would surmise, for the mountains all around keep off the intense cold. As a stock for almonds and for other stone fruits, I scarcely would recommend this Tangut almond, since it suckers badly and since these suckers are very hard to remove." (Meyer.)

Chamaedorea tepejilote Liebm. (Phoenicaceae.) 41705. Seeds of a palm from Zacuapam, Vera Cruz, Mexico. Presented by Dr. C. A. Purpus. "The undeveloped flower makes an excellent vegetable and is eaten in the State of Vera Cruz everywhere. Besides this, it is a fine little palm. Shady places." (Purpus.)

Chayota edulis Jacq. (Cucurbitaceae.) 41800-41801. Seeds of large white and large green varieties of chayote from Adjuntas, Porto Rico. Presented by Mr. Bartolomé Barceló. "These varieties produce well in this country on the borders of ravines in cool places, as in pits, and they are best produced in cool places which have a stream of water. In such places they yield abundantly. The white variety is more appreciated than the green. Here they are used for salads and the country people also feed them to pigs." (Barceló.)

Corylus ferox Wallich. (Betulaceae.) 41812. Hazel seeds from Darjeeling, India. Presented by Mr. G. H. Cave, Lloyd Botanic Garden. "This is a small tree native of Nepal and Sikkim found growing at altitudes ranging from 8,000 to 10,000 feet. The fruit which has an edible kernel is covered with a prickly cup. The wood is pinkish-white in color, moderately hard and even grained." (Watt's Dictionary of the Economic Products of India.)

Diospyros kaki L. f. (Diospyraceae.) 41691-41702, 41779-41793. Cuttings of 27 varieties of persimmon from Okitsu, Japan. Presented by Prof. I. Ishiwara, Horticultural Experiment Station.



Dried Strips of Watermelon, Citrullus vulgaris.

Strips of a hard-fleshed variety of watermelon hung on lines to dry in the sun and air. After they are sufficiently dessicated they are cut up in short pieces and pickled in brine, in syrup, or made into glace sweets. Photograph taken by Mr. F. N. Meyer, near Chiang po, Shensi, China, August 17, 1914. (Neg. No. P13183FS.)

Fresh Mung Bean Sprouts, Phaseolus radiatus.

A cartload of tubs filled with bean sprouts produced by sprouting the mung bean. These bean sprouts are eaten as a vegetable when scalded, and they are a very tasteful product indeed when served either hot with cut-up meat or cold as a salad with some soybean sauce and vinegar sprinkled over them. Photograph taken by Mr. F. N. Meyer at Peking, China, June 28, 1913. (Neg. No. P13019FS.)

Garcinia mestoni F.M.Bailey. (Clusiaceae.) 41802. Cuttings of Meston's mangosteen from Cairns, Queensland, Australia. Presented by Mr. G. Williams, Department of Agriculture and Stock. An erect, slender, graceful tree 20 feet or more high; with drooping branches; opposite, narrow lanceolate, glossy, dark green leaves; white flowers; and globular fruit possessing a sharp, pleasant, acid flavor. (Adapted from A Synopsis of the Queensland Flora, 3rd Supplement, 1890.)

Laurocerasus acuminata (Wall.) Roemer. (Amygdalaceae.) 41813. Seeds from Darjeeling, India. Presented by Mr. G. H. Cave, Lloyd Botanic Garden. A laurel cherry from the eastern Himalayas and Assam, at elevations of 4,000 to 7,000 feet, with thin dark bark and reddish brown wood.

Lilium giganteum Wallich. (Liliaceae.) 41687. Seeds from Boulder, Colo. Presented by Mr. Theo. D. A. Cockerell. "Seeds of a lily sent by Mr. J. Henry Watson, Manchester, England. They were grown in 1915 by Sir Herbert Maxwell, of Wistownshire, Scotland. This is a very fine thing, as I know from photographs sent by Mr. Watson of plants growing in his garden." (Cockerell.)

Linum usitatissimum L. (Linaceae.) 41811. Flax seed from Lawnton, Queensland, Australia. Presented by Mr. Reginald W. Peters, Director, Experimental Grounds, at the request of Mr. Leslie Gordon Corrie, Brisbane, Australia. "This seed is the result of several years hybridization and selection in England for length of unbranched fiber and absence of tillers at base." (Peters.)

Macadamia ternifolia F.Muell. (Proteaceae.) 41808. Seeds of the Queensland nut from Honolulu, Hawaii. Presented by Mr. C. S. Judd, Board of Commissioners of Agriculture and Forestry. "These grew in Honolulu on introduced trees from either Queensland or New South Wales, Australia, brought here about thirty years ago. The fruit on these trees ripens almost throughout the whole year. Younger trees of this species in Honolulu begin to bear at eight years from planting and they are readily started from the nuts. The leaf of the tree, which seldom attains a height of more than thirty feet in these islands, is a dark green, very shiny and resembles the leaf of the eastern chestnut oak. There are only a few bearing trees in Honolulu, and the nuts from these are roasted in the same manner as salted almonds and are used on the table for the same purpose. They are crisp and tender and in my opinion far excel salted almonds." (Judd.)

Mimusops elengi L. (Sapotaceae.) 41809. Seeds from Port Louis, Mauritius. Presented by Mr. G. Regnard. "The fruit of this species is edible and commonly eaten by young

boys, but is sweet and insiped. Being a forest tree, the seed should be sown in nurseries and young plants should be planted in a definite place under cover of some shady shrub while young. They must not be directly in open ground." (Regnard.)

Paeonia suffruticosa Andrews. (Ranunculaceae.) 41710. Seeds of tree peony from Taochow Old City, Kansu, China. Presented by Rev. C. F. Snyder at the request of Mr. F. N. Meyer. "The real wild moutan peony which occurs in very inacessible mountain valleys in Tibet proper, where white men are not allowed to proceed to under ordinary circumstances. Ripens its seeds in the Chinese 8th moon (about September 15th to October 20th)." (Meyer.)

Panicum distachyon L. (Poaceae.) 41746. Seeds from the Australian Exhibit at the Panama-Pacific International Exposttion, San Francisco, California. Procured by Mr. Roland McKee. "Excellent pasture and hay grass; 2½ feet, leafy, fine seed habits for a Panicum." (McKee.) "The stems of this grass creep and root at the joints; it is an immense yielder, and is grown for hay in the northern districts. This is one of several indigenous grasses tested at Gracemere, near Rockhampton, and considered best for the purpose of hay-making." (Bailey, in Maiden, Useful Native Plants of Australia.)

Prunus serrulata Lindley. (Amygdalaceae.) 41817-41870. Cuttings of 54 varieties of flowering cherry from Japan. Presented by the Yokohama Nursery Company, Yokohama, Japan, through Mr. George W. Guthrie, American Ambassador, Tokyo. For a full discussion of the numerous varieties of the flowering cherry, see Miyoshi, in the Journal of the College of Science, Imperial University of Tokio, vol. 34, art. 1, pp. 1-264 where the flowering cherry hitherto known as *P. pseudocerasus* is treated under the name *P. serrulata* Lindl. Attempt has been made to bring the varietal names into accord with this work. Mr. E. H. Wilson has also recently published a study of the Japanese cherries.

Pollinia fulva (R.Br.) Benth. (Poaceae.) 41754. Seed from the Australian Exhibit at the Panama-Pacific International Exposition, San Francisco., Calif. Procured by Mr. Roland McKee. "Brown top. Considered by stock owners to equal the Mitchell grass as a drought resister, and on account of its sweetness is often called sugar grass. 3 feet, leafy, fine stem, good seed habit." (McKee.)

Randia aculeata L. (Rubiaceae.) 41810. Seeds of the ink berry received from San José, Costa Rica. Presented by Dr. Carlos Wercklé, Department of Agriculture. "A beautiful, very small-leaved shrub, very fine hedge plant for cold highlands." (Wercklé.) "A shrub or small tree, widely

distributed in the West Indies. It yields a blue dye, and the wood is used for minor purposes when toughness is required." (Cook & Collins, Economic Plants of Porto Rico, Contributions from the National Herbarium, Vol. 8, p. 228.)

Styrax hookeri C.B.Clarke. (Styracaceae.) 41815. Seeds from Darjeeling, India. Presented by Mr. G. H. Cave, Lloyd Botanic Garden. "This is a small tree frequently met with in Sikkim and Bhutan at altitudes between 6,000 and 7,000 feet. The wood is white, close-grained, and moderately hard." (Watt's Dictionary of the Products of India.)

Temeda spp. (Poaceae.) 41748 & 41757. Seeds of kangaroo grass from the Australian Exhibit at the Panama-Pacific Internatinnal Exposition, San Francisco, Calif. Procured by Mr. Roland McKee. *Themeda forskalii* Hackel. 41757. "Common form of kangaroo grass. There are several forms of this species but all are equally good fodder grasses; 3 feet, fine stems, medium leafy, fair seed habit." (McKee.) *Themeda gigantea avenacea* (F.Muell.) Hackel. 41748. "A good fodder grass, 6 feet, rather coarse, medium leafy, fair seed habit. Tall oat grass downs country." (McKee.)

Vitis tiliaefolia H.B.K. (Vitaceae.) 41707. Grape seed from Zacuapam, Vera Cruz, Mexico. Presented by Dr. C. A. Purpus. "This Vitis has a very sour fruit but it makes a most excellent jelly and is adapted to a tropical country; grows in sunny places in brush woods. *Vitis vinifera* cannot be raised here at all." (Purpus.)

NOTES FROM CORRESPONDENTS ABROAD.

Miss Eliza J. Scidmore writes from Yokohama, Japan, April 30, 1916.

The wasabi I bought at a vegetable shop was not "as large" as my arm, but only "as long" as my arm, if you gather the difference. I demanded wasabi at one place and they had none. At the next shop, they lifted a plank in the floor and shook out of the loose earth a long, snaky root which I took home and tried. I did not know, until you wrote, that it was the foreign horseradish grown here from imported seed. It was white and very pungent, exactly (like) our own horseradish. The real wasabi, Japanese horseradish, is a spindling little root, seldom ten inches in length -- usually six inches. The flesh is greenish, and it has equal pungency perhaps, but is bitter in the taste. It is no good, to my mind. The Japanese had better keep on growing the foreign kind of wasabi. Their own six-inch kind is smaller but costs about the same as the half yard of foreign wasabi, and with Japanese dishes, raw fish and such, one gets the tiniest pinch of the greenish stuff, ground fine.

In a letter received from Mr. I. M. Karzin, Issyl-kul, Akmolinsk Government, Siberia, dated March 22, 1916;

"Many thanks or the seeds sent of American plums, of which *Prunus americana nigra* proves fully resistant to the Siberian climate. This plum, sent in fall of 1913, gave splendid growth and endured very well the severe winter of 1914-1915, with frost down to -40 degrees R."

NOTES ON BEHAVIOR OF PREVIOUS INTRODUCTIONS.

Amygdalus davidiana. Mr. Marsden Manson, San Francisco, Calif., in a letter dated May 20, 1916, says: "*Amygdalus davidiana* is by far the best and hardiest stock I have ever known and its introduction has repaid the support of the Bureau of Plant Industry for several years. Peaches and nectarines on *A. davidiana* are growing and bearing well for young trees."

Amygdalus persica. 33219. *Vainqueur* Peach. Fruits of this variety were sent in to this office on June 5th, and referred to the office of Pomological Investigations. Mr. Wight of that office, reports as follows: "This peach compares very favorably in quality with other early varieties, such as Alexander, Amsden and Sneed; and since it is earlier than the Alexander, it may have considerable value as an early peach, at least for local markets; and I think it also has considerable value as breeding material for production of an early peach of still better quality. The flesh next the stone has a slightly bitter taste, but this might not have been prominent if the specimens could have been well ripened on the tree, as they were picked rather green in order to send them successfuly so far in a mailing box." Mr. R. L. Beagles, in charge of the Plant Introduction Station at Chico, Calif., reports that this variety ripened its fruits about ten days earlier than the Alexander, the most widely grown, early, commercial peach of the Pacific States, and is therefore likely to prove a very valuable peach.

Ilex cornuta. 22979. Holly. From F. N. Meyer, of Soochow, Kiangsu, China. Mr. Meyer sent in the following note with this form: "A very ornamental bush or small tree, loaded in winter with scarlet berries. A slow grower and probably not hardy North. Chinese name *Ta hu tse.*" At the Plant Introduction Garden, at Chico, this form has succeeded admirably and promises to be one of the best hollies for regions where the winter is not too severe. Probably it would do well from Washington south.

Juniperus chinensis. 18577. Chinese Juniper, - a columnar form. From F. N. Meyer, Shan-hai-kwan, China. Trees

A Grove of the Chinese Pistache, Pistacia chinensis.

A large and extended grove of Chinese pistache trees planted as a burial grove to a neighboring village. The dense, dark-green foliage, relieved here and there by a few canary-yellow tinted branches, contrasts vividly with the brown and barren hills around. Carefully planted beds of garlic in foreground. Photograph taken by Mr. F. N. Meyer at Tsai chia pu, Shensi, China, September 9, 1914. (Neg. No. P13155FS.)

An Old Chinese Pistache, Pistacia chinensis.

Near view of the enormous trunk of a Chinese pistache tree, measuring 16 feet in circumference, showing the size this species will reach. This is possibly one of the largest specimens in existence and is doubtless several centuries old. Trees of this species are now growing satisfactorily in various places in the United States. An avenue of them was planted at the Chico, Calif., Garden in 1911. Photograph taken by Mr. F. N. Meyer at Tsai chia pu, Shensi, China, September 9, 1914. (Neg. No. P13155FS.)

at the Plant Introduction Station, at Yarrow, Md., are at present about 12 feet high, nearly cylindrical in shape and only about 18 inches in diameter. The dense foliage is of a glaucous, green color. This is one of the best of the junipers of recent introduction and promises to be an ornamental of very considerable value. This tree is now being grown by several nurseries, namely: Bobbink & Atkins, Rutherford, N. J.; Cottage Gardens Co., Queens, N. Y.; and Andorra Nurseries, Chestnut Hill, Pa. It will probably be offered for sale by them in a short time.

Mangifera indica. 8730. Paheri Mango. From Bombay, India. Received through Messrs. Lathrop and Fairchild. An oval, plump fruit, weighing about 10 ounces; of dull yellow color, blush red around the base. The flesh is orange, nearly free from fibre, and of very rich, spicy flavor. Some authorities consider it the best flavored mango of Bombay. This mango is showing considerable promise at the Plant Introduction Station at Miami, from whence splendid fruits have been sent to this office.

Mangifera indica. 11645. Cambodiana Mango. From Mr. M. E. Haffner, Saigon, Cochin China. A long, compressed, beaked fruit, about 8 ounces in weight and deep yellow in color. This office has received from the Plant Introduction Garden, at Miami, fruits of this excellent Indian mango, which is said to be more productive than most other Indian varieties. These fruits were of the finest quality. Owing to the free-fruiting habit of the tree, it promises to be one of the best mangoes for Florida.

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